Our Case No. 09792909-4647

#### IN THE CLAIMS

Please amend the claims as follows:

1. (Currently amended) A bis(aminostyryl)anthracene compound represented by the general formula [i], [ii], [iii], or [iV] below.

General formula [1]:

(where  $R^2$  and  $R^3$  each denotes an unsubstituted aryl group, and  $R^1$  and  $R^4$  each denotes an aryl group represented by the general formula (1) below.)

General-formula (1)

(where R<sup>7</sup>, R<sup>8</sup>, R<sup>9</sup>, R<sup>10</sup>, and R<sup>11</sup> are identical or different groups, at least one of them being a saturated or unsaturated hydrocarbon oxy group or hydrocarbon group having at least one carbon; and R<sup>5</sup> and R<sup>6</sup> are identical or different groups, at least one of them being a hydrogen atom, cyano group, nitro group, trifluoromethyl group, or halogen atom.)

General formula [ii]

Our Case No. 09792909-4647

(where R<sup>12</sup>, R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> are identical or different groups, each denoting an aryl group represented by the general formula (2) below.)

### General formula (2)

(where R<sup>18</sup>, R<sup>19</sup>, R<sup>20</sup>, R<sup>21</sup>, and R<sup>22</sup> are identical or different groups, at least one of them being a saturated or unsaturated hydrocarbon oxy group or hydrocarbon group having at least one carbon; and R<sup>16</sup> and R<sup>17</sup> are identical or different groups, at least one of them being a hydrogen atom, cyano group, nitro group, trifluoremethyl group, or halogen atom.)

#### General-formula [III]

(where at least one of R<sup>23</sup>, R<sup>24</sup>, R<sup>25</sup>, and R<sup>26</sup> denotes an aryl group represented by the general formula (3) below, with the remainder being an unsubstituted aryl group.)

General formula (3)

Our Case No. 09792909-4647

(where R<sup>29</sup>, R<sup>30</sup>, R<sup>31</sup>, R<sup>32</sup>, and R<sup>33</sup> are identical or different groups, at least one of them being a saturated or unsaturated hydrocarbon amino group; and R<sup>27</sup> and R<sup>28</sup> are identical or different groups, at least one of them being a hydrogen atom, cyano group, nitro group, trifluoromethyl-group, or halogen atom.)

### General-formula [IV]

(where R<sup>35</sup> and R<sup>36</sup> are identical or different groups, each denoting an aryl group represented by the general formula (4) below.)

### General formula (4)

(where R<sup>40</sup>, R<sup>41</sup>, R<sup>42</sup>, R<sup>43</sup>, and R<sup>44</sup>-are identical or different groups, each denoting hydrogen or at least one of them being a saturated or unsaturated hydrocarbon exy group or hydrocarbon group having one or more carbons; and R<sup>34</sup>-and R<sup>37</sup>-are identical or different groups, at least one of them being an aryl group represented by the general formula (5) below.)

### General formula (5)

Our Case No. 09792909-4647

(where R<sup>45</sup>, R<sup>48</sup>, R<sup>47</sup>, R<sup>48</sup>, R<sup>49</sup>, R<sup>50</sup>, and R<sup>54</sup> are identical or different groups, each denoting a hydrogen atom or at least one of them being a saturated or unsaturated hydrocarbon exy group or hydrocarbon group, or hydrocarbon amino group having one or more carbons; and R<sup>38</sup> and R<sup>30</sup> are identical or different groups, at least one of them being a hydrogen atom, cyane group, nitro group, trifluoromethyl group, or halogen atom.)

2. (Currently amended) A bis(aminostyryl)anthracene compound represented by the general formula (6) below.

### General formula (6)

(where Ar<sup>1</sup>, Ar<sup>2</sup>, Ar<sup>3</sup>, and Ar<sup>4</sup> are identical or different, each denoting an aryl group which may have a substituent, and if a substituent is present, said aryl group being one which is selected from aryl groups represented by the general formula (7), (8), and (9), (10), (11), (12), (12'), or (12") below.

#### General formula (7)

### General formula (8)

Our Case No. 09792909-4647

### General formula (9)

### General formula (10)

### General formula (11)

### General formula (12)

### General fermula (12')

### General formula (12")

Our Case No. 09792909-4647

(where R<sup>52</sup>, R<sup>53</sup>, and R<sup>54</sup> each denotes a saturated or unsaturated hydrocarbon group having one or more carbons; R<sup>56</sup>, R<sup>56</sup>, R<sup>57</sup>, R<sup>58</sup>, R<sup>59</sup>, and R<sup>69</sup> are identical or different, each denoting a saturated or unsaturated hydrocarbon group having one or more carbons; n is an integer of 0 to 6; m is an integer of 0 to 3; and I is an integer of 0 to 4.)

- 3. (Currently amended) A bis(aminostyryl)anthracene compound as defined in Claim 2, wherein  $R^{52}$ ,  $R^{53}$ ,  $R^{54}$ ,  $R^{55}$ ,  $R^{56}$ ,  $R^{57}$ ,  $R^{58}$ ,  $R^{69}$ , and  $R^{69}$  each has a carbon number of 1 to 6 carbons.
- 4. (Currently amended) A bis(aminostyryl)anthracene compound as defined in Claim 1 or 2 which is represented by the general formula (13), (13'), (14), (15), (16), (17'), or (17") below.

General formula (13)

(where R<sup>61</sup> denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

General formula (13')

Our Case No. 09792909-4647

(where R<sup>81</sup> denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

### General formula (14)

(where R<sup>62</sup> denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

General formula (15)

Our Case No. 09792909-4647

(where R<sup>63</sup> denotes a saturated or unsaturated hydrocarbon group or hydrocarbon oxy group having 1 to 6 carbon atoms.)

### General formula (16)

(where R<sup>64</sup>-denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

General formula (17)

Our Cas N . 09792909-4647

(where R<sup>65</sup>-denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

### General formula (17')

(where R<sup>65</sup>-denotes a hydrogen atom or a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

General formula (17")

Our Case No. 09792909-4647

(where R<sup>65</sup>-denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

5. (Currently amended) A bis(aminostyryl)anthracene compound as defined in Claim 1 or 2 which is represented by the structural formulae (18)-1, (18)-2, (18)-2, (18)-3, (18)-4, (18)-5, (18)-6, (18)-6', (18)-7, (18)-8, (18)-9, (18)-10', (18)-10', or (18)-11 below.

### Structural formula (18)-1

### Our Case No. 09792909-4647

# Structural formula (18)-2'

# Structural formula (18)-3

#### Our Case No. 09792909-4647

# Structural formula (18)-5

### Structural formula (18) 6

### Structural formula (18)-6'

#### Our Cas No. 09792909-4647

### Structural formula (18) 7

### Structural-formula (18)-8

#### Our Case No. 09792909-4647

### Structural formula (18) 9

# Structural formula (18)-10

### Structural formula (18) 10'

#### Our Case No. 09792909-4647

### Structural formula (18)-10"

### Structural formula (18)-11

6. (Currently amended) A bis(aminostyryl)anthracene compound represented by the general formula (19) below.

Our Case No. 09792909-4647

### General formula (19)

(where  $Ar^1$ ,  $Ar^2$ ,  $Ar^3$ , and  $Ar^4$  are identical or different, each denoting an aryl group which may have a substituent, and if a substituent is present, said aryl group being one which is selected from aryl groups represented by the general formula (7), (8), (9), (10), (11), (12), (12), or (12") below.

### -General formula (7)

### General formula (8)

### General formula (9)

### General formula (10)

### General formula (11)

Our Case No. 09792909-4647

# General formula (12)

# General formula (12')

# General formula (12")

(where R<sup>52</sup>, R<sup>53</sup>, and R<sup>54</sup> each denotes a saturated or unsaturated hydrocarbon group having one or more carbons; R<sup>56</sup>, R<sup>56</sup>, R<sup>57</sup>, R<sup>58</sup>, R<sup>59</sup>, and R<sup>60</sup> are identical or different, each denoting a saturated or unsaturated hydrocarbon group having one or more carbons; n is an integer of 0 to 6; m is an integer of 0 to 3; and I is an integer of 0 to 4.)

7. (Currently amended) A bis(aminostyryl)anthracene compound as defined in Claim claim 6, wherein  $R^{52}$ ,  $R^{53}$ ,  $R^{54}$ ,  $R^{65}$ ,  $R^{56}$ ,  $R^{57}$ ,  $R^{58}$ ,  $R^{59}$ , and  $R^{60}$  each has 1 to 6 carbon atoms.

Our Case No. 09792909-4647

8. (Currently amended) A bis(aminostyryl)anthracene compound as defined in Claim claim 1 or 6 which is represented by the general formula (20), (21), (22), (23), (24), (24') or (24") below.

# General formula (20)

(where R<sup>61</sup> denotes a saturated or unsaturated hydrocarbon group having 1 to 6

# General formula (21)

(where R<sup>62</sup> denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

# General formula (22)

Our Case No. 09792909-4647

(where R<sup>63</sup> denotes a saturated or unsaturated hydrocarbon group or hydrocarbon oxy group having 1 to 6 carbon atoms.)

General formula (23)

(where R<sup>64</sup> denotes a saturated or unsaturated hydrocarbon group having 1-to-6 carbon atoms.)

General formula (24)

Our Case No. 09792909-4647

(where R<sup>65</sup>-denotes a saturated or unsaturated hydrocarbon-group having 1-to 6 carbon atoms.)

General formula (24')

(where R<sup>65</sup>-denotes a saturated or unsaturated hydrocarbon-group having 1 to 6 carbon-atoms.)

General formula (24")

Our Case No. 09792909-4647

(where R<sup>65</sup> denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

9. (Currently amended) A bis(aminostyryl)anthracene compound as defined in Claim 1 or 6 which is represented by the structural formulae (25)-1, (25)-2, (25)-2', (25)-3, (25)-4, (25)-5, (25)-6, (25)-6', (25)-7, (25)-8, (25)-9, (25)-10', (25)-10', or (25)-11-below.

### Our Case No. 09792909-4647

### Structural formula (25)-2

# Structural formula (25)-2'

Our Case No. 09792909-4647

# Structural formula (25)-4

# Structural formula (25) 6

### Our Case No. 09792909-4647

### Structural formula (25) 7

# Structural formula (25)-9

# Structural formula (25) 10'

Our Case No. 09792909-4647

### Structural formula (25)-11

10. (Currently amended) A bis(aminostyryl)anthracene compound which is represented by the general formula (26) below.

# General formula (26)

Our Case No. 09792909-4647

(where Ar<sup>1</sup>, Ar<sup>2</sup>, Ar<sup>3</sup>, and Ar<sup>4</sup> are identical or different, each denoting an aryl group which may have a substituent, and if a substituent is present, said aryl group being one which is selected from aryl groups represented by the general formula (7), (8), (9), (10), (11), (12), (12'), or (12") below.

### -General formula (7)

### General formula (8)

### General formula (9)

### General formula (10)

### General formula (11)

Our Case No. 09792909-4647

U.S. Application No. 09/680,371

### General formula (12)

#### General formula (12')

#### General formula (12")

(where R<sup>52</sup>, R<sup>53</sup>, and R<sup>54</sup>-each denotes a saturated or unsaturated hydrocarbon group having one or more carbons; R<sup>55</sup>, R<sup>56</sup>, R<sup>57</sup>, R<sup>58</sup>, R<sup>59</sup>, and R<sup>60</sup>-are identical or different, each denoting a saturated or unsaturated hydrocarbon group having one or more carbons; n is an integer of 0 to 6; m is an integer of 0 to 3; and I is an integer of 0 to 4.).

11. (Currently amended) A bis(aminostyryl)anthracene compound as defined in Claim 10, wherein R<sup>52</sup>, R<sup>53</sup>, R<sup>54</sup>, R<sup>55</sup>, R<sup>56</sup>, R<sup>56</sup>, R<sup>56</sup>, R<sup>56</sup>, and R<sup>69</sup> each has 1 to 6 carbon atoms.

Our Case No. 09792909-4647

12. (Currently amended) A bis(aminostyryl)anthracene compound as defined in Claim 1 or 10 which is represented by the general formulae (27), (28), (29), (30), (31), (31), or (31") below.

General formula (27)

(where R<sup>61</sup> denotes a saturated or unsaturated hydrocarbon group having 1 to 6

General formula (28)

Our Case No. 09792909-4647

(where R<sup>62</sup> denotes a saturat d or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

### General formula (29)

(where R<sup>63</sup> denotes a saturated or unsaturated hydrocarbon group or hydrocarbon oxy group having 1 to 6 carbon atoms.)

# General formula (30)

Our Case No. 09792909-4647

(where R<sup>64</sup> denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

### General formula (31)

# where R<sup>65</sup> denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

# General formula (31')

Our Case No. 09792909-4647

(where R<sup>65</sup> denotes a saturated or unsaturated hydrocarbon group having 1-to 6 carbon atoms.)

. . .

# General formula (31")

(where R<sup>65</sup>-denotes a saturated or unsaturated hydrocarbon-group having 1 to 6 carbon atoms.)

13. (Currently amended) A bis(aminostyryl)anthracene compound as defined in Claim 1 or 10 which is represented by the structural formulae (32)-1, (32)-2, (32)-3, (32)-4, (32)-5, (32)-6, (32)-6, (32)-7, (32)-8, (32)-9, (32)-10, (

Our Case No. 09792909-4647

# Structural formula (32)-2

Our Cas No. 09792909-4647

# Structural formula (32)-3

Our Case No. 09792909-4647

# Structural formula (32)-5

Our Case No. 09792909-4647

## Structural formula (32) 6'

# Structural formula (32) 8

### Our Case No. 09792909-4647

U.S. Application No. 09/680,371

## Structural formula (32) 10

# Structural formula (35) 10'

Our Case N . 09792909-4647

U.S. Application No. 09/680,371

## Structural formula (32) 10"

14. (Cancelled) A process for producing a bis(aminostyryl) anthracene compound represented by the general formula [I], [II], [III], or [IV] below, said process comprising condensing at least one species of 4-(N,N-diarylamino)benzaldehyde represented by the general formula [V] or [VI] below and diphosphonic ester represented by the general formula [VIII] below or diphosphonium represented by the general formula [VIII] below.

Our Case No. 09792909-4647

U.S. Application No. 09/680,371

#### General formula [V]

### General formula [VI]

(where R<sup>66</sup> and R<sup>67</sup> each denotes an aryl group corresponding to R<sup>1</sup>, R<sup>2</sup>, R<sup>12</sup>, R<sup>13</sup>, R<sup>23</sup>, R<sup>24</sup>, R<sup>34</sup>, or R<sup>35</sup> given below; and R<sup>68</sup> and R<sup>69</sup> each denotes an aryl group corresponding to R<sup>3</sup>, R<sup>4</sup>, R<sup>14</sup>, R<sup>15</sup>, R<sup>25</sup>, R<sup>26</sup>, R<sup>36</sup>, or R<sup>37</sup> given below.)

### General formula [VII]

### General formula [VIII]

(where  $R^{70}$  and  $R^{71}$  are identical or different, each denoting a hydrocarbon group;  $R^{72}$  and  $R^{73}$  each denotes a group corresponding to  $R^5$ ,  $R^6$ ,  $R^{16}$ ,  $R^{17}$ ,  $R^{27}$ ,  $R^{28}$ ,  $R^{38}$ , or  $R^{39}$  given below; and X denotes a halogen atom.)

General formula [I]

Our Case No. 09792909-4647

(where R<sup>2</sup> and R<sup>3</sup> each denotes an unsubstituted aryl group, and R<sup>1</sup> and R<sup>4</sup> each denotes an aryl group represented by the general formula (1) below.)

### General formula (1)

(where R<sup>7</sup>, R<sup>8</sup>, R<sup>9</sup>, R<sup>10</sup>, and R<sup>11</sup> are identical or different groups, at least one of them being a saturated or unsaturated hydrocarbon oxy group or hydrocarbon group having one or more carbons; and R<sup>5</sup> and R<sup>6</sup> are identical or different groups, at least one of them being a hydrogen atom, cyano group, nitro group, trifluoromethyl group, or halogen atom.)

### General formula [II]

(where R<sup>12</sup>, R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> are identical or different groups, each denoting an aryl group represented by the general formula (2) below.)

### General formula (2)

Our Case No. 09792909-4647

(where R<sup>18</sup>, R<sup>19</sup>, R<sup>20</sup>, R<sup>21</sup>, and R<sup>22</sup> are identical or different groups, at least one of them being a saturated or unsaturated hydrocarbon oxy group or hydrocarbon group having one or more carbons; and R<sup>16</sup> and R<sup>17</sup> are identical or different groups, at least one of them being a hydrogen atom, cyano group, nitro group, trifluoromethyl group, or halogen atom.)

#### General formula [III]

(where at least one of  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  denotes an aryl group represented by the general formula (3) below, with the remainder being an unsubstituted aryl group.)

#### General formula (3)

(where R<sup>29</sup>, R<sup>30</sup>, R<sup>31</sup>, R<sup>32</sup>, and R<sup>33</sup> are identical or different groups, at least one of them being a saturated or unsaturated hydrocarbon amino group; and R<sup>27</sup> and R<sup>28</sup> are identical or different groups, at least one of them being a hydrogen atom, cyano group, nitro group, trifluoromethyl group, or halogen atom.)

#### General formula [IV]

(where  $R^{35}$  and  $R^{36}$  are identical or different groups, each denoting an aryl group represented by the general formula (4) below.)

### General formula (4)

Our Case No. 09792909-4647

(where R<sup>40</sup>, R<sup>41</sup>, R<sup>42</sup>, R<sup>43</sup>, and R<sup>44</sup> are identical or different groups, each denoting hydrogen or at least one of them being a saturated or unsaturated hydrocarbon oxy group or hydrocarbon group having one or more carbons; and R<sup>34</sup> and R<sup>37</sup> are identical or different groups, being an aryl group represented by the general formula (5) below.)

General formula (5)

(where R<sup>45</sup>, R<sup>46</sup>, R<sup>47</sup>, R<sup>48</sup>, R<sup>49</sup>, R<sup>50</sup>, and R<sup>51</sup> are identical or different groups, each denoting a hydrogen atom or at least one of them being a saturated or unsaturated hydrocarbon oxy group or hydrocarbon group, or hydrocarbon amino group having one or more carbons;

and R<sup>38</sup> and R<sup>39</sup> are identical or different groups, at least one of them being a hydrogen atom, cyano group, nitro group, trifluoromethyl group, or halogen atom.)

15. (Cancelled) A process for producing a bis(aminostyryl) anthracene compound as defined in Claim 14, wherein said condensation is accomplished by Wittig-Homer reaction or Wittig reaction, which involves treating the diphosphonic ester and/or diphosphonium with a base in a solvent, thereby giving <u>a</u> carboanion, and condensing this carboanion with the 4-(N,N-diarylamino)benzaldehyde.

16. (Cancelled) A process for producing a bis(aminostyryl) anthracene compound as defined in Claim 14, wherein said bis(aminostyryl) anthracene is represented by the general formula (6) below.

General formula (6)

Our Case N . 09792909-4647

(where Ar<sup>1</sup>, Ar<sup>2</sup>, Ar<sup>3</sup>, and Ar<sup>4</sup> are identical or different, each denoting an aryl group which may have a substituent, and if a substituent is present, said aryl group being one which is selected from aryl groups represented by the general formula (7), (8), (9), (10), (11), (12), (12), or (12) below.

#### General formula (7)

#### General formula (8)

#### General formula (9)

#### General formula (10)

### General formula (11)

Our Cas No. 09792909-4647

General formula (12)

General formula (12')

General formula (12")

(where R<sup>52</sup>, R<sup>53</sup>, and R<sup>54</sup> each denotes a saturated or unsaturated hydrocarbon group having one or more carbons; R<sup>55</sup>, R<sup>56</sup>, R<sup>57</sup>, R<sup>58</sup>, R<sup>59</sup>, and R<sup>60</sup> are identical or different, each denoting a saturated or unsaturated hydrocarbon group having one or more carbons; n is an integer of 0 to 6; m is an integer of 0 to 3; and I is an integer of 0 to 4.)

said process comprising condensing at least one species of 4-(N,N-diarylamino)benzaldehyde represented by the general formula (33) or (34) below with diphosphonic ester represented by the general formula (35) below or diphosphonium represented by the general formula (36) below.

General formula (33)

Our Case No. 09792909-4647

#### General formula (34)

#### General formula (35)

#### General formula (36)

(where Ar<sup>1</sup>, Ar<sup>2</sup>, Ar<sup>3</sup>, Ar<sup>4</sup>, R<sup>70</sup>, R<sup>71</sup> and X are defined as above.)

- 17. (Cancelled) A process for producing a bis(aminostyryl) anthracene compound as defined in Claim 16, wherein  $R^{70}$  and  $R^{71}$  each denotes a saturated hydrocarbon group having 1 to 4 carbon atoms.
- 18. (Cancelled) A process for producing a bis(aminostyryl) anthracene compound as defined in Claim 16, wherein R<sup>52</sup>, R<sup>53</sup>, R<sup>54</sup>, R<sup>55</sup>, R<sup>56</sup>, R<sup>57</sup>, R<sup>58</sup>, R<sup>59</sup>, and R<sup>60</sup> each has 0 to 6 carbon atoms.

Our Case No. 09792909-4647

19. (Cancelled) A process for producing a bis(aminostyryl) anthracen compound as defined in Claim 14 or 16, wherein said process yields a bis(aminostyryl)anthracene compound represented by the general formula (13), (14), (15), (16), (17), (17'), or (17") below.

#### General formula (13)

(where R<sup>61</sup> denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

#### General formula (13')

(where R<sup>61</sup> denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

Our Case No. 09792909-4647

### G neral formula (14)

(where R<sup>62</sup> denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

### General formula (15)

(where R<sup>63</sup> denotes a saturated or unsaturated hydrocarbon group or hydrocarbon oxy group having 1 to 6 carbon atoms.)

### General formula (16)

Our Case No. 09792909-4647

(where R<sup>64</sup> denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

General formula (17)

(where R<sup>65</sup> denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

General formula (17')

Our Case No. 09792909-4647

(where R<sup>65</sup> denotes a hydrogen atom or a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

General formula (17")

(where R<sup>65</sup> denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

20. (Cancelled) A process for producing a bis(aminostyryl) anthracene compound as defined in Claim 14 or 16, wherein said process yields a bis(aminostyryl)anthracene compound represented by the structural formula (18)-1, (18)-2, (18)-2', (18)-3, (18)-4, (18)-5, (18)-6, (18)-6', (18)-7, (18)-8, (18)-9, (18)-10, (18)-10', (18)-10', or (18)-11 below.

#### Our Case No. 09792909-4647

### Structural formula (18)-1

### Structural formula (18)-2

### Structural formula (18)-2'

#### Our Case No. 09792909-4647

### Structural formula (18)-4

## Structural formula (18)-5

#### Our Case No. 09792909-4647

### Structural formula (18)-6'

### Structural formula (18)-7

#### Our Case No. 09792909-4647

## Structural formula (18)-9

#### Our Case No. 09792909-4647

### Structural formula (18)-10'

18.

### Structural formula (18)-10"

Our Case No. 09792909-4647

21. (Cancelled) A proc ss for producing a bis(aminostyryl)anthracene compound as defined in Claim 14, wherein said bis(aminostyryl)anthracene is represented by the general formula (19) below.

General formula (19)

(where Ar<sup>1</sup>, Ar<sup>2</sup>, Ar<sup>3</sup>, and Ar<sup>4</sup> are identical or different, each denoting an aryl group which may have a substituent, and if a substituent is present, said aryl group being one which is selected from aryl groups represented by the general formula (7), (8), (9), (10), (11), (12), (12'), or (12") below.

General formula (7)

General formula (8)

General formula (9)

General formula (10)

General formula (11)

Our Case No. 09792909-4647

#### General formula (12)

#### General formula (12')

### General formula (12")

(where R<sup>52</sup>, R<sup>53</sup>, and R<sup>54</sup> each denotes a saturated or unsaturated hydrocarbon group having one or more carbons; R<sup>55</sup>, R<sup>56</sup>, R<sup>57</sup>, R<sup>58</sup>, R<sup>59</sup>, and R<sup>60</sup> are identical or different, each denoting a saturated or unsaturated hydrocarbon group having one or more carbons; n is an integer of 0 to 6; m is an integer of 0 to 3; and I is an integer of 0 to 4.)

said process comprising condensing at least one species of 4-(N,N-diarylamino)benzaldehyde represented by the general formula (33) or (34) below with diphosphonic ester represented by the general formula (37) below or diphosphonium represented by the general formula (38) below.

#### General formula (33)

### General formula (34)

Our Case No. 09792909-4647

#### General formula (37)

#### General formula (38)

(where Ar<sup>1</sup>, Ar<sup>2</sup>, Ar<sup>3</sup>, Ar<sup>4</sup>, R<sup>70</sup>, R<sup>71</sup> and X are defined as above.)

- 22. (Cancelled) A process for producing a bis(aminostyryl)anthracene compound as defined in Claim 21, wherein  $R^{70}$  and  $R^{71}$  each denotes a saturated hydrocarbon group having 1 to 4 carbon atoms.
- 23. (Cancelled) A process for producing a bis(aminostyryl)anthracene compound as defined in Claim 21, wherein R<sup>52</sup>, R<sup>53</sup>, R<sup>54</sup>, R<sup>55</sup>, R<sup>56</sup>, R<sup>57</sup>, R<sup>58</sup>, R<sup>59</sup>, and R<sup>60</sup> each has 0 to 6 carbon atoms.
- 24. (Cancelled) A process for producing a bis(aminostyryl)anthracene compound as defined in Claim 14 or 21, said process yielding a bis(aminostyryl)anthracene compound represented by the general formulae (20), (21), (22), (23), (24), (24') or (24") below.

#### General formula (20)

Our Case No. 09792909-4647

(where R<sup>61</sup> denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms-)

General formula (21)

(where R<sup>62</sup> denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

General formula (22)

Our Case No. 09792909-4647

(where  $R^{63}$  denotes a saturated or unsaturated hydrocarbon group or hydrocarbon oxy group having 1 to 6 carbon atoms.)

General formula (23)

(where R<sup>64</sup> denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

General formula (24)

Our Case No. 09792909-4647

(where R<sup>65</sup> denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

Our Case No. 09792909-4647

### General formula (24')

(where R<sup>65</sup> denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

### General formula (24")

(where R<sup>65</sup> denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

Our Case No. 09792909-4647

25. (Cancelled) A process for producing a bis(aminostyryl)anthracene compound as defined in Claim 14 or 21, said process yielding a bis(aminostyryl)anthracene compound represented by the structural formulae (25)-1, (25)-2, (25)-2, (25)-3, (25)-4, (25)-5, (25)-6, (25)-6, (25)-7, (25)-8, (25)-9, (25)-10, (25)-10', (25)-10', or (25)-11 below.

#### Structural formula (25)-1

#### Structural formula (25)-2

Our Case N . 09792909-4647

### Structural formula (25)-3

Our Case No. 09792909-4647

### Structural formula (25)-5

Our Case No. 09792909-4647

### Structural formula (25)-6'

Our Case No. 09792909-4647

### Structural formula (25)-8

Our Case No. 09792909-4647

# Structural formula (25)-10

#### Our Case No. 09792909-4647

# Structural formula (25)-10"

Our Case No. 09792909-4647

26. (Cancelled) A process for producing a bis(aminostyryl)anthracene compound as defined in Claim 14, wherein said bls(aminostyryl)anthracene is represented by the general formula (26) below.

General formula (26)

(where Ar<sup>1</sup>, Ar<sup>2</sup>, Ar<sup>3</sup>, and Ar<sup>4</sup> are identical or different, each denoting an aryl group which may have a substituent, and if a substituent is present, said aryl group being one which is selected from aryl groups represented by the general formula (7). (8), (9), (10), (11), (12), (12'), or (12") below.

General formula (7)

General formula (8)

Our Case No. 09792909-4647

General formula (9)

General formula (10)

General formula (11)

General formula (12)

General formula (12')

General formula (12")

(where R<sup>52</sup>, R<sup>53</sup>, and R<sup>54</sup> each denotes a saturated or unsaturated hydrocarbon group having one or more carbons; R<sup>55</sup>, R<sup>56</sup>, R<sup>57</sup>, R<sup>58</sup>, R<sup>59</sup>, and R<sup>60</sup> are identical or different, each denoting a saturated or unsaturated hydrocarbon group having one or

Our Case No. 09792909-4647

more carbons; n is an integ r of 0 to 6; m is an integer of 0 to 3; and I is an Integer of 0 to 4.)

said process comprising condensing at least one species of 4-(N,N-diarylamino)benzaldehyde represented by the general formula (33) or (34) below with diphosphonic ester represented by the general formula (39) below or diphosphonium represented by the general formula (40) below.

### General formula (33)

#### General formula (34)

#### General formula (39)

### General formula (40)

(where Ar<sup>1</sup>, Ar<sup>2</sup>, Ar<sup>3</sup>, Ar<sup>4</sup>, R<sup>70</sup>, R<sup>71</sup> and X are defined as above.)

- 27. (Cancelled) A process for producing a bis(aminostyryl)anthracene compound as defined in Claim 26, wherein  $R^{70}$  and  $R^{71}$  each denotes a saturated hydrocarbon group having 1 to 4 carbon atoms.
- 28. (Cancelled) A process for producing a bis(aminostyryl)anthracene compound as defined in Claim 26, wherein  $R^{52}$ ,  $R^{53}$ ,  $R^{54}$ ,  $R^{55}$ ,  $R^{55}$ ,  $R^{57}$ ,  $R^{59}$ , and  $R^{50}$  each has 1 to 6 carbon atoms.

Our Case No. 09792909-4647

29. (Cancelled) A process for producing a bis(aminostyryl)anthracene compound as defined in Claim 14 or 26, said process yielding a bis(aminostyryl)anthracene compound represented by the general formula (27), (28), (29), (30), (31), (31') or (31") below.

### General formula (27)

(where  ${\sf R}^{\sf 61}$  denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

General formula (28)

Our Case No. 09792909-4647

(where R<sup>62</sup> denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

General formula (29)

(where  $R^{63}$  denotes a saturated or unsaturated hydrocarbon group or hydrocarbon oxy group having 1 to 6 carbon atoms.)

Our Case No. 09792909-4647

## General formula (30)

(where  $R^{64}$  denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

## General formula (31)

group having 1 to 6 carbon atoms.)

Our Case No. 09792909-4647

### General formula (31')

(where  $R^{65}$  denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

### General formula (31")

(where  $R^{65}$  denotes a saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms.)

Our Case No. 09792909-4647

30. (Cancelled) A process for producing a bis(aminostyryl)anthracene compound as defined in Claim 14 or 26, said process yielding a bis(aminostyryl)anthracene compound represented by the structural formula (32)-1, (32)-2, (32)-2, (32)-3, (32)-4, (32)-5, (32)-6, (32)-6, (32)-7, (32)-8, (32)-9, (32)-10, (32)-10' below.

Structural formula (32)-1

## Structural formula (32)-2

Structural formula (32)-2'

Our Case No. 09792909-4647

## Structural formula (32)-3

## Structural formula (32)-4

Our Case No. 09782909-4647

## Structural formula (32)-5

## Structural formula (32)-6

## Structural formula (32)-6'

Our Case No. 09792909-4647

## Structural formula (32)-7

## Structural formula (32)-8

Our Case No. 09792909-4647

### Structural formula (32)-9

Structural formula (32)-10

Our Case No. 09792909-4647

## Structural formula (35)-10'

Structural formula (32)-10"

Our Case No. 09792909-4647

31. (Withdrawn) A diphosphonic ester or diphosphonium represented by the general formula [VII] or [VIII] below.

### General formula [VII]

#### General formula [VIII]

(where R<sup>70</sup> and R<sup>71</sup> are identical or different, each denoting a hydrocarbon group; R<sup>72</sup> and R<sup>73</sup> are identical or different, at least one of them denoting a hydrogen atom, cyano group, nitro group, trifluoromethyl group, or halogen atom, and X denotes a halogen atom.)

Our Case No. 09792909-4647

32. (Withdrawn) A diphosphonic ster or diphosphonium as defined in Claim 31, wherein R<sup>70</sup> and R<sup>71</sup> each denotes a saturated hydrocarbon group having 1 to 4 carbon atoms.

33. (Withdrawn) A diphosphonic ester or diphosphonium as defined in Claim 31, which is represented by the general formula (35) or (36) below.

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General formula (35)

General formula (36)

(where R<sup>70</sup>, R<sup>71</sup>, and X are defined as above.)

34. (Withdrawn) A diphosphonic ester or diphosphonium as defined in Claim 31, which is represented by the general formula (37) or (38) below.

General formula (37)

General formula (38)

(where R<sup>70</sup>, R<sup>71</sup>, and X are defined as above.)

Our Case No. 09792909-4647

35. (Withdrawn) A diphosphonic est r or diphosphonium as defined in Claim 31, which is represented by the general formula (39) or (40) below.

### General formula (39)

### General formula (40)

(where R<sup>70</sup>, R<sup>71</sup>, and X are defined as above.)

36. (Withdrawn) A process for producing a diphosphonic ester or diphosphonium represented by the general formula [VII] or [VIII] below, said process comprising reacting an aryl halide compound represented by the general formula [IX] below and a trialkyl phosphite represented by the general formula [X] below or triphenyl phosphine (PPh<sub>3</sub>).

### General formula [IX]

(where  $R^{72}$  and  $R^{73}$  are identical or different, at least one of them denoting a hydrogen atom, cyano group, nitro group, trifluoromethyl group, or halogen atom, and X denotes a halogen atom.)

#### General formula [X]

$$P(OR^{74})_3$$
 or  $P(OR^{75})_3$ 

Our Case No. 09792909-4647

(where  $R^{74}$  and  $R^{75}$  are identical or different, each denoting a hydrocarbon group.)

General formula [VII]

General formula [VIII]

(where R<sup>70</sup> and R<sup>71</sup> are identical or different, each denoting a hydrocarbon group; and  $R^{72}$ ,  $R^{73}$ , and X are defined as above.)

- 37. (Withdrawn) A process for producing a diphosphonic ester or diphosphonium as defined in Claim 36, wherein  $R^{70}$  and  $R^{71}$  each denotes a saturated hydrocarbon group having 1 to 4 carbon atoms.
- 38. (Withdrawn) A process for producing a diphosphonic ester or diphosphonium as defined in Claim 36, said process yielding a diphosphonic ester or diphosphonium represented by the general formula (35) or (36).

General formula (35)

General formula (36)

Our Case No. 09792909-4647

(where  $R^{70}$ ,  $R^{71}$ , and X are defined as above.)

39. (Withdrawn) A process for producing a diphosphonic ester or diphosphonium as defined in Claim 36, said process yielding a diphosphonic ester or diphosphonium represented by the general formula (37) or (38).

General formula (37)

General formula (38)

(where  $R^{70}$ ,  $R^{71}$ , and X are defined as above.)

40. (Withdrawn) A process for producing a diphosphonic ester or diphosphonium as defined in Claim 36, said process yielding a diphosphonic ester or diphosphonium represented by the general formula (39) or (40).

General formula (39)

General formula (40)

Our Case No. 09792909-4647

(where  $R^{70}$ ,  $R^{71}$ , and X are defined as above.)

41. (Withdrawn) An aryl halide compound represented by the general formula [IX] below.

### General formula [IX]

(where  $R^{72}$  and  $R^{73}$  are identical or different, at least one of them denoting a hydrogen atom, cyano group, nitro group, trifluoromethyl group, or halogen atom.)

42. (Withdrawn) A process for producing an aryl halide compound represented by the-general formula [IX] below, said process comprising reacting an anthracene compound represented by the general formula [XI] below with an Nhalogenated succinimide represented by the general formula [XII] below.

## General formula [XI]

(where  $R^{72}$  and  $R^{73}$  are identical or different, at least one of them denoting a hydrogen atom, cyano group, nitro group, trifluoromethyl group, or halogen atom.) General formula [XII]

Our Case No. 09792909-4647

(where X denotes a halogen atom.)

General formula [IX]

(where  $R^{72}$  and  $R^{73}$  are defined as above, and X denotes a halogen atom.)

Our Case No. 09792909-4647

# SUPPORT FOR THE AMENDMENT

Claims 1-13 have been amended to correct informalities and grammatical errors. No new matter has been added.